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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,006	09/14/2000	Patrick K Sullivan	OCEANIT	9060

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EXAMINER

MALLARI, PATRICIA C

ART UNIT PAPER NUMBER

3736

DATE MAILED: 11/05/2003

25

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,006

Applicant(s)

SULLIVAN ET AL.

Examiner

Patricia C. Mallari

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 49-51, 53, 54, 56 and 73-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 56 is/are allowed.
- 6) ☒ Claim(s) 49-51, 53, 54 and 73-75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18, 24. 6) ☐ Other: _____

DETAILED ACTION

The examiner regrettably withdraws the allowability of claims 49-51, 53, 54, and 73-75 in view of the newly cited references Pelz, Tao, and Hatschek. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49, 53 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelz in view of Tao. Pelz discloses a system comprising several detectors 1, 31, 51, 61, 71 which may be piezoelectric film (see fig. 7, sensor 71) and incorporated into a patient supporting surface or furniture, for detecting physiological parameters from the patient. An additional sensor may be used to obtain environmental noise signals and subtract them from the physiological signals. A circuit 8 or computer 13 receives the physiological signals and determines the rate of pulse wave propagation (pulse wave velocity) therefrom, where an interim step also involves the determination of pulse wave transit time ($T_1 - t_1$ or $T_2 - t_2$). A circuit 11 or computer 13 also stores and displays the information (figs. 1, 3, 7, and 11). Pelz is silent as to the type of environmental noise sensor.

Tao discloses a movement monitor comprising a pressure transducer 21, within a mattress 20, for detecting patient-related signals. In one embodiment, the transducer 21 actually comprises a pair of microphones 47, one installed within the mattress 20, and the other located externally of the mattress 20 such that it picks up external pressure changes and noise elements for canceling noise in the signals of the first microphone. A piezoelectric film may be used as the transducer 21, or alternatively, as the microphones 47 (figs. 2, 8, 10; col. 9, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use piezoelectric film as the environmental noise sensor of Pelz, since Pelz discloses using such a sensor, and Tao teaches both using the same type of sensor for sensing environmental noise as for sensing the patient-related signal and using piezoelectric film as both sensors.

Claims 50, 51, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelz in view of Tao, as applied to claims 49 and 75 above, and further in view of Hatschek. Pelz, as modified lacks a process that calculates blood pressure data in response to the pulse wave velocity. However, Hatschek discloses a blood pressure evaluation device comprising an evaluation unit 65 that determines both systolic and diastolic blood pressure values from pulse wave velocity values (col. 16, lines 16-col. 19, line 34; figs. 1 & 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the blood pressure device of Hatschek with the system of Pelz in order to provide more information to a clinician for more accurate diagnosis.

Claims 73 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelz in view of Tao, as applied to claims 49 and 75 above, and further in view of Seponnen. Pelz, as modified lacks PVDF as plural sensors. However, Seponnen discloses using a transducer comprising PVDF-film, wherein PVDF-film is a piezoelectric material (col. 3, lines 37-45; fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use PVDF film as the transducers of Pelz, as modified by Tao, since Pelz, as modified, teaches using piezoelectric film as its transducers and Seponnen discloses that PVDF film is merely a type of piezoelectric film.

Allowable Subject Matter

Claim 56 is allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach determining the locations of the first and third sensors on the patient from the comparison of signals from the first sensor with the signals from the third sensor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 4,550,564 to Benthin et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (703) 605-0422. The examiner can normally be reached on Mon-Fri 9:30 am-7:00 pm (alternate Fri. off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max F. Hindenburg can be reached on (703) 308-3130. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Patricia C. Mallari
pcm

Robert L. Nasser
ROBERT L. NASSER
PRIMARY EXAMINER